Name: _____

at1110paper__practice__test (v22)

1. Solve the equation.
$$7x^2 + 9x + 8 \;=\; 5x^2 - 4x + 2$$

$$2x^2 + 13x + 6 = 0$$
$$(2x + 1)(x + 6) = 0$$
$$x = \frac{-1}{2} \qquad x = -6$$

2. Factor the expression.
$$49x^2 - 16$$

$$(7x + 4)(7x - 4)$$

3. Expand the following expression into standard form.
$$(3x + 5)(3x - 5)$$

$$9x^2 - 15x + 15x - 25$$
$$9x^2 - 25$$

4. Expand the following expression into standard form.
$$(9x - 2)^2$$

$$81x^2 - 18x - 18x + 4$$
$$81x^2 - 36x + 4$$

5. Expand the following expression into standard form.

$$(7x - 2)(3x - 5)$$

$$21x^2 - 35x - 6x + 10$$
$$21x^2 - 41x + 10$$

6. Factor the expression.

$$x^2 + 2x - 24$$

$$(x + 6)(x - 4)$$

7. Solve the equation with factoring by grouping.

$$8x^2 - 6x - 20x + 15 \ = \ 0$$

$$(2x - 5)(4x - 3) = 0$$
$$x = \frac{5}{2} \qquad x = \frac{3}{4}$$

8. Solve the equation.

$$(4x + 9)(5x + 3) \ = \ 0$$

$$x = \frac{-9}{4} \qquad x = \frac{-3}{5}$$